

ABSTRACT

A polyester resin, whereby a molded product excellent in a gas barrier property and also excellent in an ultraviolet shielding property, a color tone, etc., and which is particularly suitable for molding a bottle for e.g. a beverage required to have an aroma retention property, and further, a polyester resin, whereby the acetaldehyde content as a molded product is reduced to eliminate an influence over the taste, aroma, etc. of the content, and a process for its production, wherein the polycondensability is improved, are to be presented.

A polyester resin produced by polycondensing a dicarboxylic acid component containing terephthalic acid or its ester-forming derivative as the main component, and a diol component containing ethylene glycol as the main component in the presence of (1) a compound of at least one member selected from the group consisting of titanium group elements in Group 4A of the periodic table, via an esterification reaction or an ester exchange reaction, characterized in that the content of copolymerized components other than the terephthalic acid component and the ethylene glycol component, is not more than 4 mol% based on the total dicarboxylic acid component, and in a molded product with a thickness of 3.5 mm injection-molded at 280°C, the difference between the absorbance at a wavelength of 395 nm and the absorbance at a wavelength of 800 nm is at least 0.08,

and the difference between the absorbance at a wavelength of 500 nm and the absorbance at a wavelength of 800 nm is at most 0.05; and a process for producing a polyester resin, which comprises polycondensing a dicarboxylic acid component containing terephthalic acid or its ester-forming derivative as the main component, and a diol component containing ethylene glycol as the main component in the presence of (1) a compound of at least one member selected from the group consisting of titanium group elements in Group 4A of the periodic table, (2) a compound of at least one element selected from the group consisting of metal elements of Group Ia of the periodic table, elements of Group IIa of the periodic table, manganese, iron and cobalt, and (3) a phosphorus compound, via an esterification reaction or an ester exchange reaction, characterized in that the amounts of the respective compounds (1), (2) and (3) are such amounts that their contents will be from 0.02 to 0.2 mol as the total amount (T) of atoms of the compound (1), from 0.04 to 0.6 mol as the total amount (M) of atoms of the compound (2) and from 0.02 to 0.4 mol as the total amount (P) of atoms of the compound (3), per 1 ton of the polyester resin.